Soil Stockpile Report
Parcel A, Report No. 2

McDonnell Douglas C-6 Facility
Los Angeles, California

May 1997

MONTGOMERY WATSON

SOIL STOCKPILE REPORT
PARCEL A
REPORT NO. 2

McDONNELL DOUGLAS C-6 FACILITY
LOS ANGELES, CALIFORNIA

May 1997

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SECTION 1.0

INTRODUCTION

In October, 1996, Montgomery Watson (Montgomery) was retained by McDonnell Douglas Realty Company (MDRC) to assist with the redevelopment of Parcel A (the Site) of their C-6 facility located in Los Angeles, California. Figure 1 presents the C-6 facility. Figure 2 delineates the Site. The Site was formerly used to manufacture and store aircraft parts.

1.1 OVERVIEW

The Site consists of the northernmost quarter of the C-6 facility, encompassing approximately 50 acres. Demolition of many of the following buildings at the Site is underway: Building 29, 33, 34, 36, 37, 41, 43/44, 45, 57, 58, 61, 66-A and 67.

Information gathered during the data compilation and evaluation phase of this project indicated the presence of petroleum products and hazardous substances in the surface and subsurface.

A soil sampling and remedial excavation effort is being conducted in conjunction with the removal of foundations, slabs, and below-ground structures. The purpose of this effort is to assess soil quality and remove soil affected with petroleum hydrocarbons and other chemicals in preparation for redevelopment of the Site. Soil which is determined to be affected with petroleum hydrocarbons and other chemicals is excavated and stockpiled at the Site.

Stockpiled soil discussed in this report has been generated from Building 37 remedial excavations only.

1.2 PURPOSE AND OBJECTIVE

The purpose of this document is to evaluate the quality of the stockpiled soil generated from the Building 37 remedial excavations discussed in this report. Specifically, this document is the second in a series of stockpile reports which follows the facility-wide strategy for assessing and screening the analytical data so that the stockpiled soils can be divided into two categories: 1) soils requiring treatment or off-site disposal, and 2) soils suitable for use as construction backfill at the Site.

Along with its companion document, *Post-Remedial Excavation Confirmation Sample Report, Parcel A, Report No. 2* (Montgomery Watson, 1997(c)), this report documents that the Site excavation efforts meet the established cleanup criteria and therefore protect drinking water and the health of future users.

SECTION 2.0

BUILDING 37 REMEDIAL EXCAVATION STOCKPILES

Building 37 housed foundry operations in the south central portion of the building, and large machine presses and lathes throughout the building. Foundry and press machines were contained in 15 large pits (approximately 8 feet deep, 20 feet wide, and 60 feet long). A ground floor room on the east side of the building housed the tooling department where employees would produce parts for the machines throughout the facility. A parts cleaning tank sat in a sump within this room. Two clarifiers were located outside the east wall of the building. A hydraulically-powered elevator was located inside the northeast portion of the building.

A 20 feet by 20 feet grid has been superimposed over the footprint of Building 37 as presented in Figure 3. The location of each remedial excavation discussed in this report is presented in Figure 3. Remedial excavations were recorded using the following nomenclature:

Building No. (B#) - Remedial Excavation (RE) - Chronological Number (#)
e.g., B37-RE-4

Pertinent information related to the Building 37 remedial excavations and the stockpiled soil discussed in this report is presented below. The locations of each stockpile are presented in Figure 4 through Figure 6.

Excavation/Stockpile(s)	Approximate Volume	Date of Excavation	Stockpile Location(s)
B37-RE-2/B	36 cu yds	8 Apr 97	East of Building 29
B37-RE-2/C	280 cu yds	8,9 Apr 97	East of Building 61
B37-RE-4/U — AL	3895 cu yds total	31 Mar 97 — 24 Apr 97	Within and adjacent to the footprint of Building 61.

2.1 SOIL SAMPLING

Grid sampling and hot spot sampling has been employed at Building 37. Detailed procedures for these activities are outlined in the *Sampling and Analysis Plan for Demolition Activities at the Douglas Aircraft Company C-6 Facility* prepared by Integrated Environmental Services, Inc. and previously submitted to the Regional Water Quality Control Board (RWQCB). These procedures can be summarized as follows:

Grid Sampling: The systematic collection of soil samples at predetermined, regular intervals of a grid placed over the footprint of Building 37. A 20 feet by 20 feet grid was employed.

A photoionization detector (PID) was used to measure headspace organic vapor concentrations in the freshly exposed soil at each grid node. Soil samples were collected for analysis where at least one of the following conditions existed: 1) the headspace VOC reading exceeded 5 ppm, (2) areas where staining of the soil was visible, or (3) areas where odors were noticeable.

Hot Spot Sampling: Hot spot sampling was conducted at pre-determined locations where former items of concern were located (e.g., pits, sumps), and at other locations where demolition activities revealed soil which may have been affected by petroleum hydrocarbons or other chemicals of concern. Hot spot samples were collected for chemical analysis from a location where at least one of the following conditions existed: (1) the headspace VOC reading exceeded 5 ppm, (2) areas where staining of the soil was visible, or (3) areas where odors were noticeable.

2.2 SOIL EXCAVATION

Remedial excavation to remove affected soil was conducted when one of the following conditions was discovered: (1) elevated PID readings, (2) visible staining, and (3) noticeable odors. A conservative approach was employed such that soil which exhibited any of these characteristics was excavated and stockpiled.

Remedial excavations were performed using heavy equipment (excavators, front-end loaders, end-dump trucks) associated with the building demolition effort. Air monitoring in accordance with South Coast Air Quality Management District Rule 1166 was conducted.

The maximum depth of any excavation was approximately 10 feet below grade. Excavated soil was segregated based on the location from where it was removed. Soil stockpiles were placed on asphalt or plastic sheeting, and covered with plastic sheeting to protect the soil from the elements. A sample of the excavated soil (stockpile sample) was collected and analyzed for approximately each 250 cubic yards of material. The locations of each stockpile are presented in Figure 4 through Figure 6.

Confirmation samples were collected from the walls and floor of the excavations. Soil excavations continued until the confirmation samples indicated that: (1) PID readings were less than 5 ppm, (2) visibly stained soil had been removed, and (3) soil exhibiting odor had been removed.

2.3 SAMPLING METHODS AND ANALYTICAL SCHEDULE

2.3.1 Grid Sampling

Grid samples were collected by first exposing "fresh" soil beneath the surface using a stainless steel utensil or similar device. A PID was used to measure headspace organic vapor concentrations in the freshly exposed soil at each grid node. Soil samples were collected for analysis where at least one of the following conditions existed: 1) the headspace VOC

reading exceeded 5 ppm, (2) areas where staining of the soil was visible, or (3) areas where odors were noticeable.

Soil samples were collected for analysis in pre-cleaned, stainless steel sleeves by driving the sleeve into the soil with a rubber mallet. The ends of the sleeves were then covered with Teflon film and secured with plastic end caps. A unique sample identification using the following nomenclature was written in indelible ink on a sample label and attached to the sleeve.

Building No. (B#) - Grid Coordinate (alpha numeric) - Sample Depth (feet)
e.g., B37-G7-4'

The grid coordinate system used in the naming of samples from Building 37 is presented in Figure 3.

Sample sleeves were placed in a cooler with blue ice and transported under chain-of-custody to a State-certified laboratory for analysis. Generally, grid samples have been analyzed according to the analytical schedule presented in Table 1.

2.3.2 Hot Spot Sampling

Hot spot samples were collected by first exposing "fresh" soil beneath the surface using a stainless steel utensil or similar device. A PID was used to measure headspace organic vapor concentrations in the freshly exposed soil at each location. Soil samples were collected for analysis where at least one of the following conditions existed: 1) the headspace VOC reading exceeded 5 ppm, (2) areas where staining of the soil was visible, or (3) areas where odors were noticeable.

Soil samples were collected for analysis in pre-cleaned, stainless steel sleeves by driving the sleeve into the soil with a rubber mallet. The ends of the sleeves were then covered with Teflon film and secured with plastic end caps. A unique sample identification using the following nomenclature was written in indelible ink on a sample label and attached to the sleeve.

Building No. (B#) - Grab Sample (GS) - Chronological Number (#) - Sample Depth (feet)
e.g., B37-GS-42-3'

Sample sleeves were placed in a cooler with blue ice and transported under chain-of-custody to a State-certified laboratory for analysis. Generally, hot spot samples have been analyzed according to the analytical schedule presented in Table 1.

2.3.3 Stockpile Sampling

Stockpile samples were collected at a frequency of approximately one sample per 250 cubic yards of soil removed. Samples from the stockpiled soil were collected by using a shovel to cut vertically into the side of a stockpile at each sample location to expose "fresh" soil; samples were then collected from the exposed vertical wall.

Soil samples were collected for analysis in pre-cleaned, stainless steel sleeves by driving the sleeve into the soil with a rubber mallet. The ends of the sleeves were then covered with Teflon film and secured with plastic end caps. A unique sample identification using the following nomenclature was written in indelible ink on a sample label and attached to the sleeve.

Building No.(B#) - Remedial Excavation No.(RE#) - Stockpile Chronological Number (SP#)
e.g., B37-RE4-SP38

Sample sleeves were placed in a cooler with blue ice and transported under chain-of-custody to a State-certified laboratory for analysis.

Generally, stockpile samples have been analyzed according to the analytical schedule presented in Table 1.

2.4 STOCKPILE SOIL QUALITY

2.4.1 B37-RE-2 Stockpiles B and C

Initial soil removal at remedial excavation B37-RE-2 was conducted on February 28, 1997 as previously reported by Montgomery Watson (1997(d)).

Additional soil removal at remedial excavation B37-RE-2 was completed on April 9, 1997. Approximately 36 cubic yards of stockpiled soil associated with this additional excavation was removed with an excavator, transported and stockpiled east of Building 29 (Stockpile B) as shown in Figure 4. Approximately 280 cubic yards of soil was stockpiled east of Building 61 (Stockpile C) as presented in Figure 5.

The following types of samples have been collected and analyzed to evaluate the soil quality in B37-RE-2 Stockpiles B and C:

- Stockpile samples only

One stockpile sample was collected from the stockpiled soil at the location presented in Figure 5. The analytical data for this sample are summarized in Table 2. A complete set of laboratory analytical reports is presented in Appendix A-1.

2.4.2 B37-RE-4 Stockpiles U through AL

Initial soil removal at remedial excavation B37-RE-4 was conducted from March 3, 1997 through March 31, 1997 as previously reported by Montgomery Watson (1997(d)); however, additional stockpile samples associated with this remedial excavation were collected as late as April 17, 1997. The limits of remedial excavation B37-RE-4 presented in Figure 3 have been amended from those presented in the *Soil Stockpile Report, Parcel A, Report No. 1* (Montgomery Watson, 1997(d)) to more accurately reflect the limits of the initial and additional excavation.

Additional soil removal at remedial excavation B37-RE-4 was conducted on March 31, 1997 through April 24, 1997. Approximately 3895 cubic yards of stockpiled soil associated with this additional excavation was removed with an excavator, transported and stockpiled within and adjacent to the footprint of Building 61 (Stockpiles U through AL) as presented in Figure 6.

The following types of samples have been collected and analyzed to evaluate the soil quality in B37-RE-4 Stockpiles U through AL:

- Stockpile samples only

Twenty-two stockpile samples were collected from the stockpiled soil at locations presented in Figure 6. The analytical data for these samples are summarized in Table 3. A complete set of laboratory analytical reports is presented in Appendix A-2.

SECTION 3.0

DATA SUMMARY AND CONCLUSIONS

This section presents the methodology used throughout the project for the identification of soils that are suitable for use as backfill. In addition, this section summarizes the analytical data associated with each stockpile discussed in this report and uses the aforementioned methodology to evaluate whether the soil stockpiles are suitable for use as backfill, or require treatment and/or off-site disposal.

3.1 BACKFILL SOIL SCREENING METHODOLOGY

The backfill soil screening criteria have been developed to satisfy two primary objectives: (1) residual concentrations in backfill materials must be below levels projected to impact underlying drinking water sources, and (2) residual concentration in backfill materials must be below levels projected to potentially impact human health under future construction and commercial/industrial activities at the Site.

In accordance with these objectives, individual screening criteria were developed for both drinking water and human health protection. The development of each of these screening criteria is discussed below followed by a summary of how these values will be implemented in the evaluation of soil suitability for backfill purposes.

Drinking Water

The generalized hydrostratigraphic succession at the Site is as follows (Kennedy/Jenks, 1996(b); Dames & Moore, 1993; Department of Water Resources, 1961):

SURFACE
Bellflower Aquitard
Gage Aquifer
El Segundo Aquitard
Lynwood Aquifer

Depth to groundwater at the Site is approximately 65 feet. Hydrostratigraphic information from voluminous data collected at the neighboring Del Amo and Montrose Chemical Superfund Sites can be correlated with subsurface information collected at the Site. Hydrostratigraphic correlations suggest that the shallowest groundwater at the Site occurs in the Bellflower Aquitard, which is not recognized as a drinking water source in the region (Dames & Moore, 1993).

Although the depth to the top of the Gage Aquifer should vary from approximately 120 to 150 feet (from west to east) across the Site, the Gage Aquifer is not utilized as a source of drinking water in the region (Dames & Moore, 1993). Consequently, the shallowest drinking water resource in the region would therefore be the Lynwood Aquifer, projected to occur at the depths of approximately 210 to 240 feet (from west to east) across the Site.

Based on the depth to the first drinking water source, the following permissible concentrations have been approved by the RWQCB:

Analytes	Permissible Level
TRPH	
C4 - C12	2000 mg/kg
C13 - C22	10,000 mg/kg
C22+	50,000 mg/kg
Metals	TTLC and 10 times STLC

Note:
A waste extraction test is performed on samples with concentrations greater than 10 times STLC but less than TTLC, per CCR Title 22.

Human Health

Site-specific health-based screening criteria (HBSC) were developed by Integrated Environmental Services, Inc. using standard United States Environmental Protection Agency (USEPA) and California Environmental Protection Agency (Cal/EPA) methodologies. HBSC values were derived assuming future commercial industrial land use with an interim construction phase. Each HBSC will be used as a predictor of the risk posed by individual VOC, SVOC, PCB and metal contaminants in soil. The additive effects of multiple contaminants have been accounted for by setting target risk levels at $1x10^{-6}$ for carcinogens and 0.2 for toxicants. The final cumulative risks for all contaminants will be addressed in the post-remedial risk assessment. Table 4 summarizes the HBSCs to be used at the Site. Appendix B provides a more detailed discussion of the methodologies used to derive these values.

Evaluation Process

All soil excavated at the Site will undergo the soil screening evaluation process depicted in Figure 7. This evaluation process incorporates both drinking water and human health-based criteria. Soils that fail any portion of this test will be subjected to treatment prior to use as backfill or disposed of off-site. Once soils have passed all aspects of the evaluation procedure, they should be made readily available for use as backfill.

3.2 STOCKPILE EVALUATIONS

Chemicals of concern at the Site can be summarized as follows:

- Petroleum hydrocarbons
- VOCs
- SVOCs
- PCBs
- Metals

The sampling and analysis program for the Building 37 remedial excavations was conservatively focused on these chemicals of concern by generally implementing the following analytical schedule:

- All samples were analyzed for TRPH and metals.
- All samples which contained TRPH in concentration greater than 10,000 mg/kg were subsequently analyzed for carbon chain length.
- All grid samples were additionally analyzed for VOCs and SVOCs.
- All stockpile samples were additionally analyzed for VOCs and SVOCs.
- Stockpile samples were additionally analyzed for PCBs at a frequency of one sample per remedial excavation.
- For hot spot samples, TRPH was used as an initial screen to determine which samples would be analyzed for VOCs and SVOCs; only that sample with highest TRPH collected from a particular hot spot area was analyzed for VOCs and SVOCs.

3.2.1 B37-RE-2 Stockpiles B and C

Analytical data for soil samples associated with B37-RE-2 Stockpiles B and C are presented in Table 2. These data are summarized and evaluated below.

Petroleum hydrocarbons: TRPH were not detected.

VOCs: VOCs were not detected.

SVOCs: SVOCs were not detected.

PCBs: PCB analysis was not conducted on B37-RE-2 Stockpiles B and C soil; however, PCB analysis was performed on supplemental soil samples collected from the initial B37-RE-2 Stockpile and none were detected (Montgomery Watson, 1997(a)).

Metals: All concentrations were below their respective TTLC, 10 times STLC, and below their respective HBSC values.

Conclusion: The data suggest that the B37-RE-2 Stockpiles B and C soil is protective of drinking water and human health. Approval to use this stockpiled soil for backfill at the Site is requested.

3.2.2 B37-RE-4 Stockpiles U through AL

Analytical data for soil samples associated with the B37-RE-4 Stockpiles U through AL are presented in Table 3. These data are summarized and evaluated below.

Petroleum hydrocarbons: Stockpile sample B37-RE4-SP40 contained the highest TRPH concentration (2,400 mg/kg). A carbon chain analysis was not performed on this sample because the concentration was below the 10,000 mg/kg threshold concentration.

VOCs: All VOC concentrations were below their respective HBSC.

SVOCs: Sample B37-RE4-SP44 was collected from Stockpile AD and contained benzo(a)pyrene in concentration of 5.70 mg/kg, exceeding the benzo(a)pyrene HBSC of 1.14 mg/kg. All other SVOC concentrations were below their respective HBSC values.

PCBs: PCB analysis was not conducted on the B37-RE-4 Stockpiles U through AL soil; however, PCB analysis was performed on one stockpile confirmation sample collected from the initial B37-RE-4 stockpiled soil and 0.057 mg/kg were detected (Montgomery Watson, 1997(d)). The reported concentration was more than an order of magnitude below the HBSC for Aroclor 1254.

Metals: All concentrations were below their respective TTLC, 10 times STLC, and STLC values (when analyzed by the waste extraction test), and below their respective HBSC values.

Conclusion: Sample B37-RE4-SP44 from Stockpile AD exceeded the benzo(a)pyrene HBSC. Data from additional samples B37-RE4-SP44A through B37-RE4-SP44D indicate that elevated benzo(a)pyrene concentration is limited in extent to the vicinity of sample B37-RE4-SP44 (see Table 3 and Figure 6). Although the limited volume of soil affected with this compound above the HBSC is not expected to present a threat to drinking water or human health, soil in the area of sample B37-RE4-SP44A will be removed and disposed off-site by a licensed waste hauler in an effort to expedite closure of the Site. The data suggest that the remaining B37-RE-4 Stockpiles U through AL soil is protective of drinking water and human health. Approval to use this remaining stockpiled soil for backfill at the Site is requested.

SECTION 4.0

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Figures

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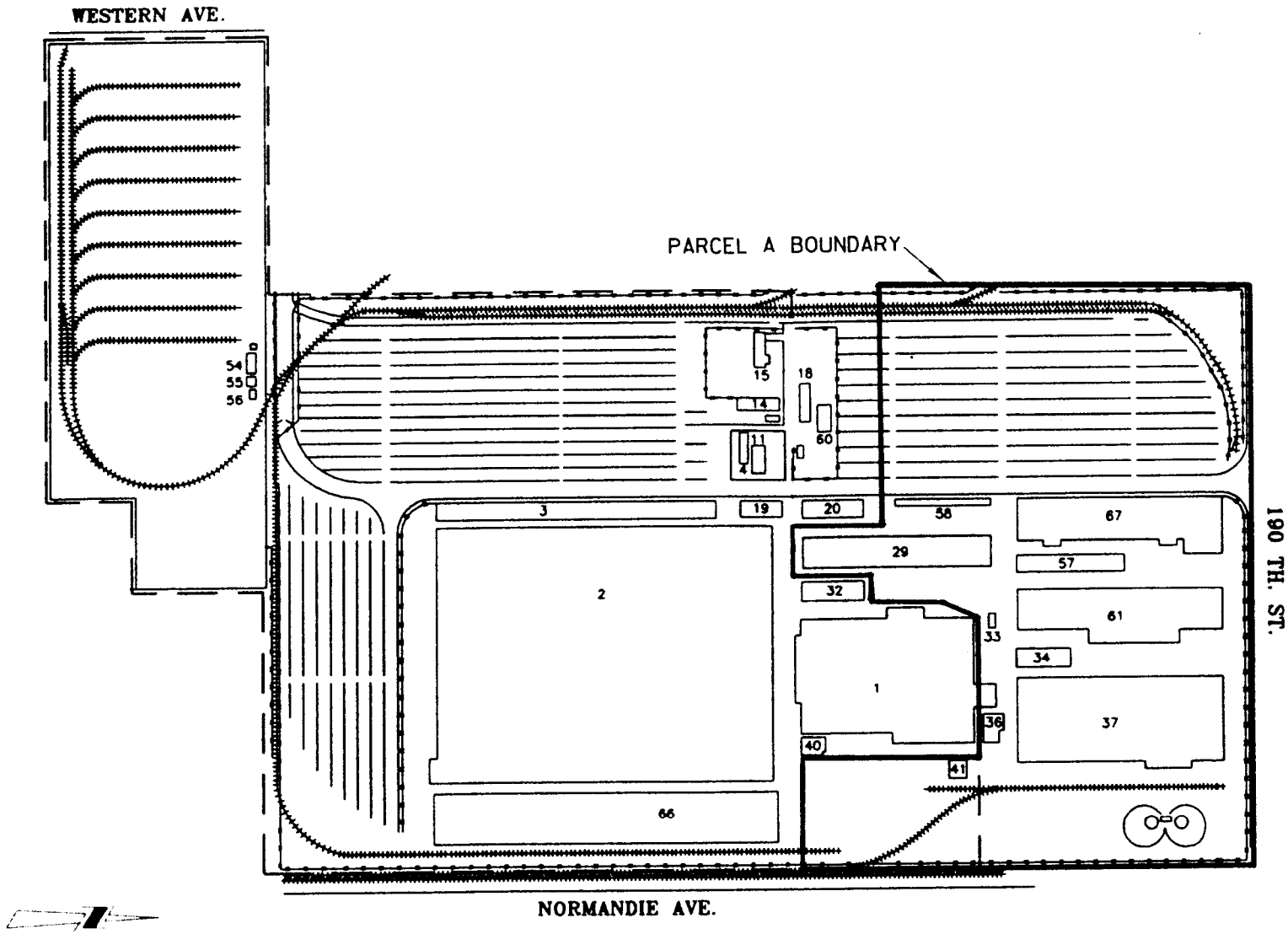
C-6 FACILITY MAP

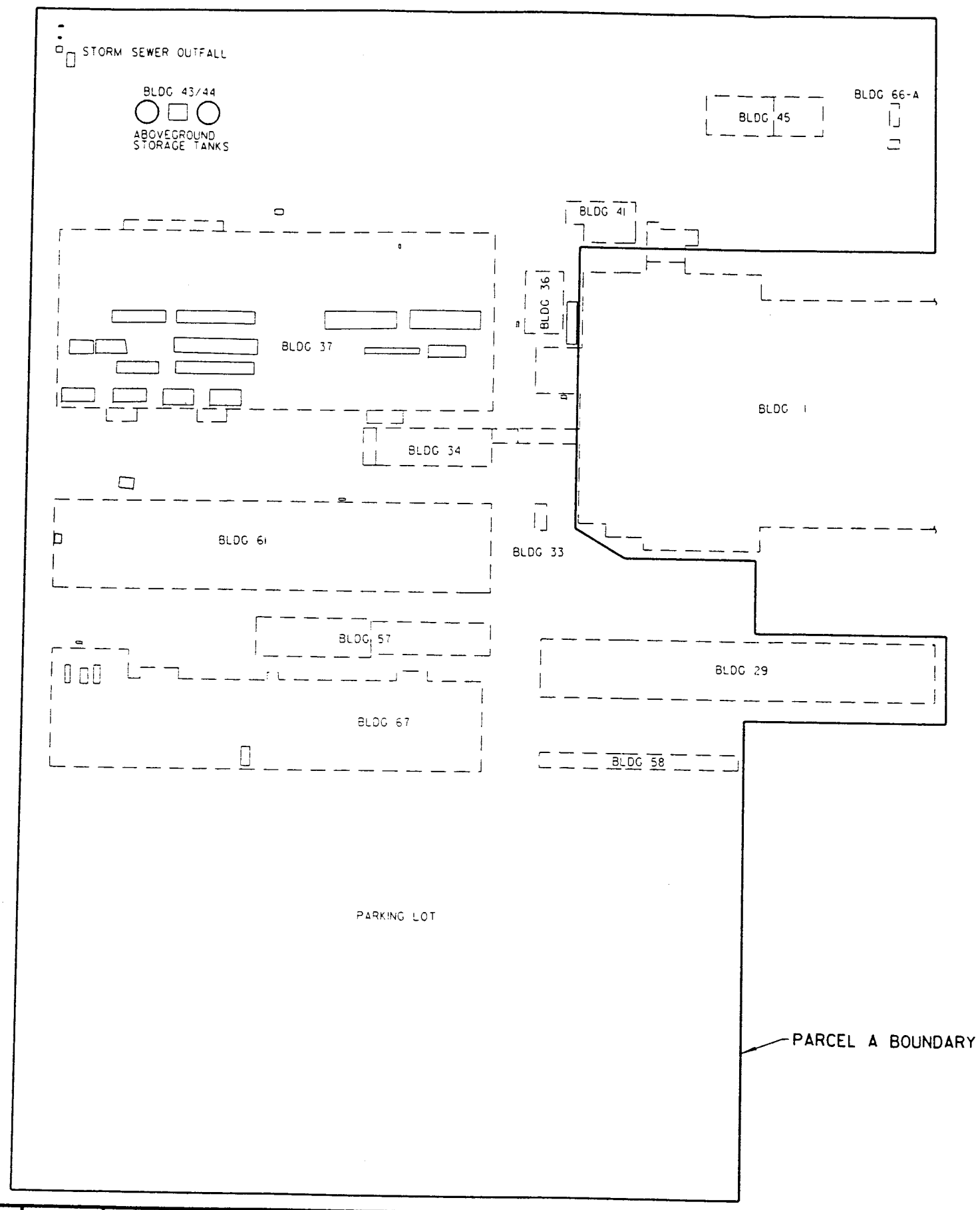
FIG. 1



0 600 1200

Approximate Scale: 1"=600'

Base map developed from Facility Layout and Subject Property Map by Kennedy/Jenks Consultants, May 1996.



N

0 40 80 120 160 200
(IN FEET)

BASE MAP DEVELOPED FROM TAIT & ASSOCIATES INC. SURVEY DRAWING DATED 10/22/96.

REV	DATE	BY	DESCRIPTION

SCALE: AS SHOWN

DESIGNED

DRAWN N. CHRAKIAN

CHECKED S. REINERS

SUBMITTED

PROJECT ENGINEER R. C. E. NO. DATE

RECOMMENDED

MONTGOMERY WATSON R. C. E. NO. DATE

MONTGOMERY WATSON
Pasadena California

APPROVED 2/5/97 DATE

APPROVED DATE

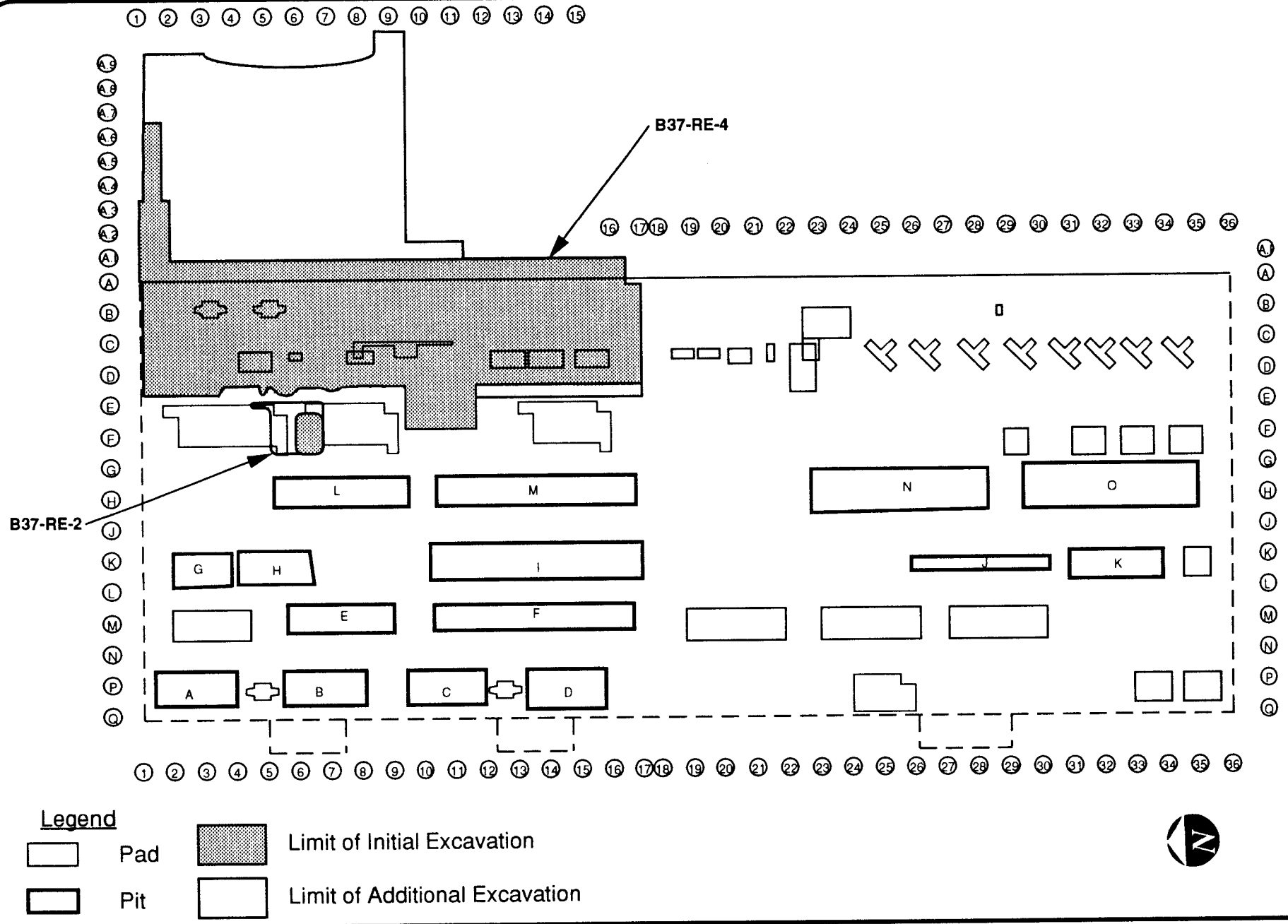
MCDONNELL DOUGLAS C-6 FACILITY

PARCEL A

SITE MAP

SHEET FIG. 2 OF • SHEETS

BOE-C6-0020966

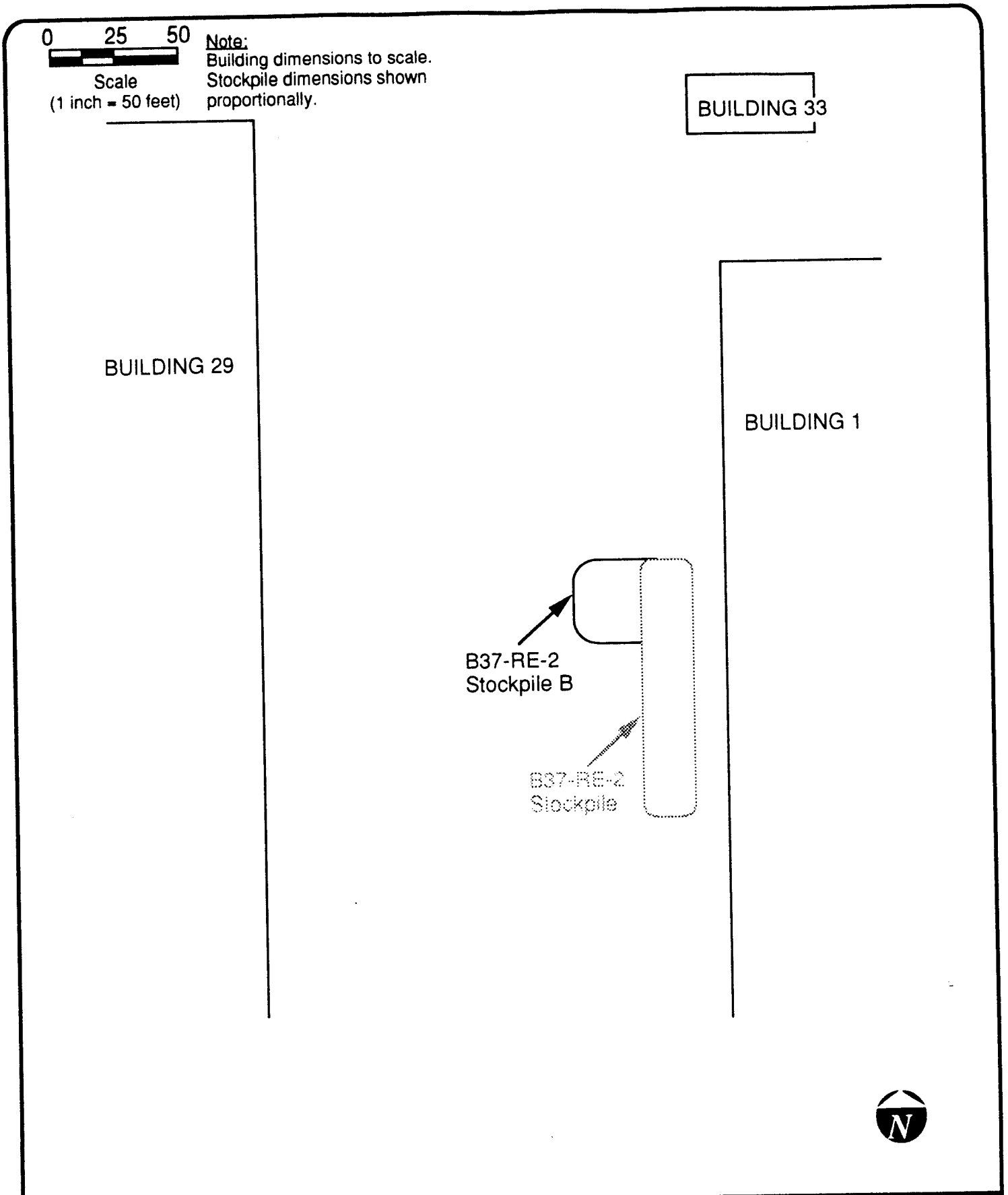


DOUGLAS AIRCRAFT COMPANY
C-6 FACILITY - BUILDING 37

FIGURE 3

BUILDING 37 GRID OUTLINE AND LOCATIONS OF REMEDIAL EXCAVATIONS

BOE-C6-0020967



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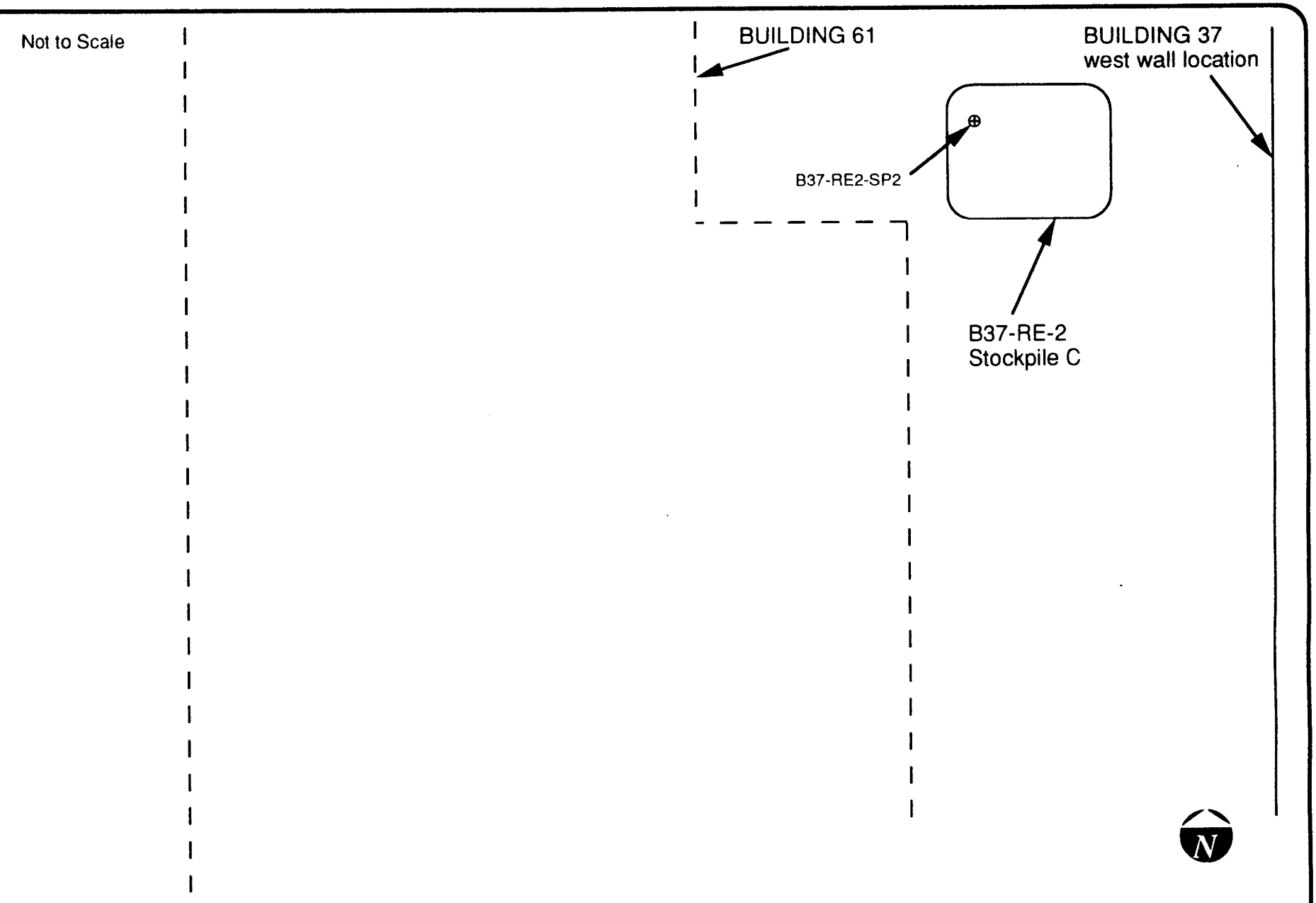
Remedial Excavation B37-RE-2 Stockpile B Location

FIGURE 4



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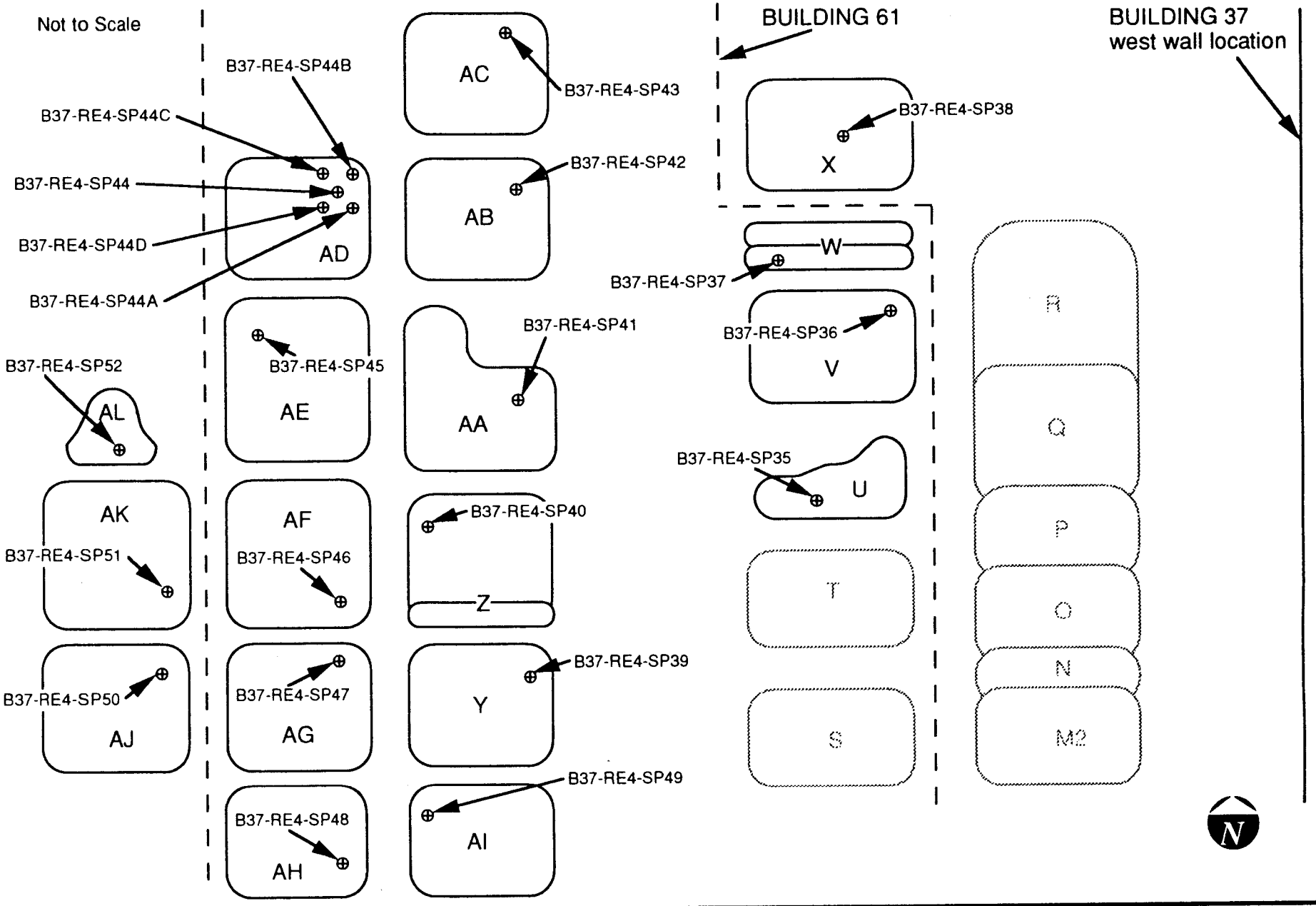
Remedial Excavation B37-RE-4 Stockpile C and Sample Location

FIGURE 5



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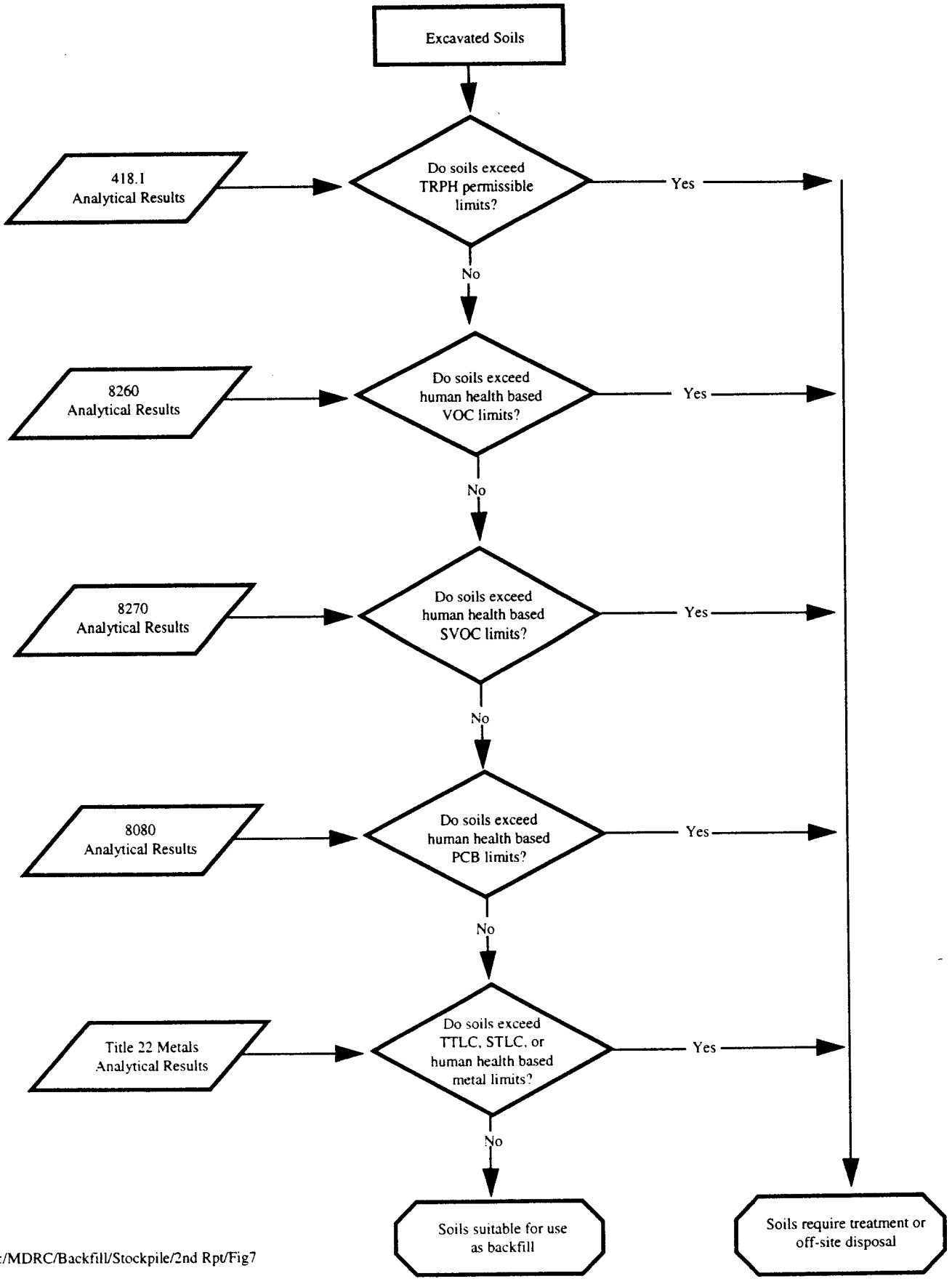
C-6 FACILITY

Remedial Excavation B37-RE-4 Stockpiles U through AL
Stockpile and Sample Locations

FIGURE 6

FIGURE 7
Soil Screening Evaluation Process



g:/MDRC/Backfill/Stockpile/2nd Rpt/Fig7

Tables

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TABLE 1

Summary of Soil Sample Analytical Methods

Sample Type	EPA Method	Analyte
Grid Sample	418.1	TRPH (a)
	6000/7000	Metals
	8260	VOCs
	8270	SVOCs
Hot Spot Sample	418.1	TRPH (a)
	6000/7000	Metals
	8260	VOCs (b)
	8270	SVOCs (b)
Stockpile Sample	418.1	TRPH (a)
	6000/7000	Metals
	8260	VOCs
	8270	SVOCs
	8080	PCBs (c)

Notes:
TRPH Total Recoverable Petroleum Hydrocarbons
VOCs Volatile Organic Compounds
SVOCs Semi-volatile Organic Compounds.
PCBs Polychlorinated Biphenyls
(a) Samples exhibiting TRPH concentration greater than 10,000 mg/kg were submitted for carbon chain analysis.
(b) Only the sample with highest TRPH concentration from a hot spot area was analyzed for VOCs and SVOCs.
(c) One stockpile sample per remedial excavation.

TABLE 2
Analytical Data Summary
Remedial Excavation B37-RE-2 Stockpile Samples*

Analyte	EPA Method	Sample Number and Collection Date: B37-RE2-SP2 4/8/97	Regulatory Levels: TTLC (mg/kg)	Regulatory Levels: 10X STLC (mg/L)
TRPH (mg/kg)	418.1	<8.0		
Title 22 Metals (mg/kg)				
Antimony	6010	<5.0	500	150
Arsenic	6010	<1.0	500	50
Barium	6010	120	10,000	1,000
Beryllium	6010	<0.1	75	7.5
Cadmium	6010	<0.1	100	10
Chromium (VI)	7196	<0.5	500	50
Chromium (total)	6010	32	2,500	50
Cobalt	6010	7.9	8,000	800
Copper	6010	12	2,500	250
Lead (total)	6010	<1.0	1,000	50
Mercury	7471	<0.01	20	2
Molybdenum	6010	<0.5	3,500	3,500
Nickel	6010	12	2,000	200
Selenium	6010	<1.0	100	10
Silver	6010	<0.1	500	50
Thallium	6010	<5.0	700	70
Vanadium	6010	35	2,400	240
Zinc	6010	49	5,000	2,500
VOCs (1) (mg/kg)	8260	ND		
SVOCs (1) (mg/kg)	8270	ND		
Carbon Chain Range (mg/kg)	sim. dist.	--		
PCBs (mg/kg)	8080	--		

mg/kg = milligrams per kilogram
mg/L = milligrams per liter
-- = not analyzed
sim.dist. = simulated distillation
ND = not detected
PCBs = Polychlorinated Biphenyls

VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

* Refer to Figure 5 for sample location

TABLE 3
Analytical Data Summary
Remedial Excavation B37-RE-4 Stockpile Samples*
Page 1 of 5

Analyte	EPA Method	Sample Number and Collection Date: B37-RE4-SP35 3/31/97	B37-RE4-SP36 3/31/97	B37-RE4-SP37 4/1/97	B37-RE4-SP38 4/1/97	B37-RE4-SP39 4/1/97	Regulatory Levels: TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	<8.0	77	88	<8.0	340		
Title 22 Metals (mg/kg)								
Antimony	6010	<5.0	<5.0	<5.0	<5.0	<5.0	500	150
Arsenic	6010	<1.0	<1.0	<1.0	<1.0	<1.0	500	50
Barium	6010	150	100	140	99	110	10,000	1,000
Beryllium	6010	<0.1	<0.1	<0.1	<0.1	<0.1	75	7.5
Cadmium	6010	<0.1	<0.1	<0.1	<0.1	<0.1	100	10
Chromium (VI)	7196	<0.5	<0.5	<0.5	<0.5	<0.5	500	50
Chromium (total)	6010	26	22	32	27	26	2,500	50
Cobalt	6010	7.1	8.3	8.4	6.7	6.4	8,000	800
Copper	6010	15	21	22	12	13	2,500	250
Lead (total)	6010	<1.0	<1.0	<1.0	<1.0	<1.0	1,000	50
Mercury	7471	<0.01	<0.01	<0.01	<0.01	<0.01	20	2
Molybdenum	6010	<0.5	<0.5	<0.5	<0.5	<0.5	3,500	3,500
Nickel	6010	9.1	11	11	9.6	11	2,000	200
Selenium	6010	<1.0	<1.0	<1.0	<1.0	<1.0	100	10
Silver	6010	<0.1	<0.1	<0.1	<0.1	<0.1	500	50
Thallium	6010	<5.0	<5.0	<5.0	<5.0	<5.0	700	70
Vanadium	6010	26	25	36	28	26	2,400	240
Zinc	6010	59	42	53	42	35	5,000	2,500
VOCs (1) (mg/kg)								
Ethylbenzene	8260	<0.025	<0.025	<0.025	<0.025	<0.0025		
Trichloroethene	8260	<0.025	<0.025	<0.025	<0.025	0.0086		
Total Xylenes	8260	<0.025	<0.025	<0.025	<0.025	<0.025		
Isopropylbenzene	8260	<0.025	<0.025	<0.025	<0.025	<0.025		
n-Propylbenzene	8260	<0.025	<0.025	<0.025	<0.025	0.004		
1,3,5-Trimethylbenzene	8260	<0.025	<0.025	<0.025	<0.025	<0.025		
tert-Butylbenzene	8260	<0.025	<0.025	<0.025	<0.025	<0.025		
1,2,4-Trimethylbenzene	8260	<0.025	<0.025	<0.025	<0.025	<0.025		
sec-Butylbenzene	8260	<0.025	<0.025	<0.025	<0.025	<0.025		
p-Isopropyltoluene	8260	<0.025	<0.025	<0.025	<0.025	<0.025		
n-Butylbenzene	8260	<0.025	<0.025	<0.025	<0.025	0.006		
1,2,4-Trichlorobenzene	8260	<0.025	<0.025	<0.025	<0.025	<0.025		
Naphthalene	8260	<0.025	<0.025	<0.025	<0.025	0.011		
1,2,3-Trichlorobenzene	8260	<0.025	<0.025	<0.025	<0.025	<0.025		
SVOCs (1) (mg/kg)								
Acenaphthene	8270	<0.100	<0.100	<0.100	<0.100	0.130		
Anthracene	8270	<0.100	<0.100	<0.100	<0.100	0.150		
Benzo (a) Anthracene	8270	<0.100	<0.100	<0.100	<0.100	0.130		
Benzo (b) Fluoranthene	8270	<0.250	<0.250	<0.250	<0.250	<0.250		
Benzo (k) Fluoranthene	8270	<0.250	<0.250	<0.250	<0.250	<0.250		
Benzo (a) Pyrene	8270	<0.250	<0.250	<0.250	<0.250	<0.250		
Benzo (g,h,i) Perylene	8270	<0.250	<0.250	<0.250	<0.250	<0.250		
Chrysene	8270	<0.100	<0.100	<0.100	<0.100	0.180		
Dibenz (a,h) Anthracene	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
bis (2-Ethylhexyl)Phthalate	8270	0.190	<0.100	<0.100	<0.100	<0.100		
Fluoranthene	8270	<0.100	<0.100	0.150	<0.100	0.120		
Fluorene	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
Indeno (1,2,3-cd)Pyrene	8270	<0.250	<0.250	<0.250	<0.250	<0.250		
2-Methylnaphthalene	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
Naphthalene	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
Phenanthrene	8270	<0.100	<0.100	<0.100	<0.100	0.320		
Pyrene	8270	<0.100	<0.100	0.120	<0.100	0.290		
Carbon Chain Range (mg/kg)	sim. dist.	--	--	--	--	--		
PCBs (mg/kg)	8080	--	--	--	--	--		

mg/kg = milligrams per kilogram
mg/L = milligrams per liter
-- = not analyzed
sim.dist. = simulated distillation
VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons
PCBs = Polychlorinated Biphenyls
(1) VOCs and SVOCs not listed were not detected
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

* Refer to Figure 6 for sample locations

TABLE 3
Analytical Data Summary
Remedial Excavation B37-RE-4 Stockpile Samples*

Analyte	EPA Method	Sample Number and Collection Date: B37-RE4-SP40 4/2/97	B37-RE4-SP41 4/9/97	B37-RE4-SP42 4/9/97	B37-RE4-SP43 4/11/97	B37-RE4-SP44 4/11/97	Regulatory Levels: TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	2,400	360	120	180	140		
Title 22 Metals (mg/kg)								
Antimony	6010	<5.0	<5.0	<5.0	<5.0	<5.0	500	150
Arsenic	6010	<1.0	<1.0	<1.0	<1.0	<1.0	500	50
Barium	6010	130	130	120	110	130	10,000	1,000
Beryllium	6010	<0.1	<0.1	<0.1	<0.1	<0.1	75	7.5
Cadmium	6010	<0.1	<0.1	<0.1	<0.1	<0.1	100	10
Chromium (VI)	7196	<0.5	<0.5	<0.5	<0.5	<0.5	500	50
Chromium (total)	6010	27	41	32	30	27	2,500	50
Cobalt	6010	8.2	9.1	8.7	5.9	7.0	8,000	800
Copper	6010	15	71	16	14	18	2,500	250
Lead (total)	6010	<1.0	<1.0	<1.0	<1.0	<1.0	1,000	50
Mercury	7471	<0.01	<0.01	<0.01	<0.01	<0.01	20	2
Molybdenum	6010	<0.5	<0.5	<0.5	<0.5	<0.5	3,500	3,500
Nickel	6010	12	17	13	11	12	2,000	200
Selenium	6010	<1.0	<1.0	<1.0	<1.0	<1.0	100	10
Silver	6010	<0.1	<0.1	<0.1	<0.1	<0.1	500	50
Thallium	6010	<5.0	<5.0	<5.0	<5.0	<5.0	700	70
Vanadium	6010	32	35	35	25	27	2,400	240
Zinc	6010	52	120	57	40	57	5,000	2,500
VOCs (1) (mg/kg)								
Ethylbenzene	8260	0.014	<0.0025	<0.0025	<0.0025	<0.100		
Trichloroethene	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.100		
Total Xylenes	8260	0.034	<0.0025	<0.0025	<0.0025	<0.100		
Isopropylbenzene	8260	0.013	<0.0025	<0.0025	<0.0025	<0.100		
n-Propylbenzene	8260	0.023	<0.0025	<0.0025	<0.0025	<0.100		
1,3,5-Trimethylbenzene	8260	0.028	<0.0025	<0.0025	<0.0025	<0.100		
tert-Butylbenzene	8260	0.014	<0.0025	<0.0025	<0.0025	<0.100		
1,2,4-Trimethylbenzene	8260	0.130	<0.0025	<0.0025	<0.0025	0.230		
sec-Butylbenzene	8260	0.020	<0.0025	<0.0025	<0.0025	<0.100		
p-Isopropyltoluene	8260	0.019	<0.0025	<0.0025	<0.0025	<0.100		
n-Butylbenzene	8260	0.019	<0.0025	<0.0025	<0.0025	0.100		
1,2,4-Trichlorobenzene	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.100		
Naphthalene	8260	0.210	<0.0025	<0.0025	<0.0025	<0.100		
1,2,3-Trichlorobenzene	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.100		
SVOCs (1) (mg/kg)								
Acenaphthene	8270	<0.100	<0.100	<0.100	<0.100	0.500		
Anthracene	8270	<0.100	<0.100	<0.100	<0.100	0.700		
Benzo (a) Anthracene	8270	<0.100	0.490	<0.100	0.220	5.300		
Benzo (b) Fluoranthene	8270	<0.250	1.900	<0.250	<0.250	7.100		
Benzo (k) Fluoranthene	8270	<0.250	0.490	<0.250	<0.250	2.900		
Benzo (a) Pyrene	8270	<0.250	0.950	<0.250	<0.250	5.700		
Benzo (g,h,i) Perylene	8270	<0.250	1.100	<0.250	<0.250	4.200		
Chrysene	8270	<0.100	2.000	<0.100	0.280	5.800		
Dibenz (a,h) Anthracene	8270	<0.100	<0.100	<0.100	<0.100	1.100		
bis (2-Ethylhexyl)Phthalate	8270	<0.100	<0.100	<0.100	<0.100	0.150		
Fluoranthene	8270	<0.100	<0.100	<0.100	0.370	9.300		
Fluorene	8270	0.130	<0.100	<0.100	<0.100	0.240		
Indeno (1,2,3-cd)Pyrene	8270	<0.250	0.800	<0.250	<0.250	4.600		
2-Methylnaphthalene	8270	0.480	<0.100	<0.100	<0.100	0.120		
Naphthalene	8270	0.130	<0.100	<0.100	<0.100	0.280		
Phenanthrene	8270	0.300	<0.100	<0.100	0.110	2.600		
Pyrene	8270	<0.100	0.180	<0.100	0.210	7.200		
Carbon Chain Range (mg/kg)	sim. dist.	--	--	--	--	--		
PCBs (mg/kg)	8080	--	--	--	--	--		

mg/kg = milligrams per kilogram
mg/L = milligrams per liter
-- = not analyzed
sim.dist. = simulated distillation
VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons
PCBs = Polychlorinated Biphenyls
(1) VOCs and SVOCs not listed were not detected
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

* Refer to Figure 6 for sample locations

TABLE 3
Analytical Data Summary
Remedial Excavation B37-RE-4 Stockpile Samples*

		Sample Number and Collection Date					
Analyte	EPA Method	B37-RE4-SP44A 5/9/97	B37-RE4-SP44B 5/9/97	B37-RE4-SP44C 5/9/97	B37-RE4-SP44D 5/9/97	Regulatory Levels	
						TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	--	--	--	--		
Title 22 Metals (mg/kg)							
Antimony	6010	--	--	--	--	500	150
Arsenic	6010	--	--	--	--	500	50
Barium	6010	--	--	--	--	10,000	1,000
Beryllium	6010	--	--	--	--	75	7.5
Cadmium	6010	--	--	--	--	100	10
Chromium (VI)	7196	--	--	--	--	500	50
Chromium (total)	6010	--	--	--	--	2,500	50
Cobalt	6010	--	--	--	--	8,000	800
Copper	6010	--	--	--	--	2,500	250
Lead (total)	6010	--	--	--	--	1,000	50
Mercury	7471	--	--	--	--	20	2
Molybdenum	6010	--	--	--	--	3,500	3,500
Nickel	6010	--	--	--	--	2,000	200
Selenium	6010	--	--	--	--	100	10
Silver	6010	--	--	--	--	500	50
Thallium	6010	--	--	--	--	700	70
Vanadium	6010	--	--	--	--	2,400	240
Zinc	6010	--	--	--	--	5,000	2,500
VOCs (1) (mg/kg)							
Ethylbenzene	8260	--	--	--	--		
Trichloroethene	8260	--	--	--	--		
Total Xylenes	8260	--	--	--	--		
Isopropylbenzene	8260	--	--	--	--		
n-Propylbenzene	8260	--	--	--	--		
1,3,5-Trimethylbenzene	8260	--	--	--	--		
tert-Butylbenzene	8260	--	--	--	--		
1,2,4-Trimethylbenzene	8260	--	--	--	--		
sec-Butylbenzene	8260	--	--	--	--		
p-Isopropyltoluene	8260	--	--	--	--		
n-Butylbenzene	8260	--	--	--	--		
1,2,4-Trichlorobenzene	8260	--	--	--	--		
Naphthalene	8260	--	--	--	--		
1,2,3-Trichlorobenzene	8260	--	--	--	--		
SVOCs (1) (mg/kg)							
Acenaphthene	8270	<0.100	<0.100	<0.100	<0.100		
Anthracene	8270	<0.100	<0.100	<0.100	<0.100		
Benzo (a) Anthracene	8270	<0.100	0.260	0.520	<0.100		
Benzo (b) Fluoranthene	8270	<0.250	0.340	0.820	<0.250		
Benzo (k) Fluoranthene	8270	<0.250	<0.250	0.300	<0.250		
Benzo (a) Pyrene	8270	<0.250	0.300	0.610	<0.250		
Benzo (g,h,i) Perylene	8270	<0.250	<0.250	0.480	<0.250		
Chrysene	8270	<0.100	0.380	0.680	<0.100		
Dibenz (a,h) Anthracene	8270	<0.100	<0.100	0.110	<0.100		
bis (2-Ethylhexyl)Phthalate	8270	<0.100	<0.100	<0.100	<0.100		
Fluoranthene	8270	<0.100	0.480	0.870	<0.100		
Fluorene	8270	<0.100	<0.100	<0.100	<0.100		
Indeno (1,2,3-cd)Pyrene	8270	<0.250	<0.250	0.520	<0.250		
2-Methylnaphthalene	8270	<0.100	<0.100	<0.100	<0.100		
Naphthalene	8270	<0.100	<0.100	<0.100	<0.100		
Phenanthrene	8270	<0.100	0.210	0.260	<0.100		
Pyrene	8270	<0.100	0.470	0.840	<0.100		
Carbon Chain Range (mg/kg)	sim. dist.	--	--	--	--		
PCBs (mg/kg)	8080	--	--	--	--		

mg/kg = milligrams per kilogram
mg/L = milligrams per liter
-- = not analyzed
sim.dist. = simulated distillation
VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons
PCBs = Polychlorinated Biphenyls

(1) VOCs and SVOCs not listed were not detected
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentrat

* Refer to Figure 6 for sample locations

TABLE 3
Analytical Data Summary
Remedial Excavation B37-RE-4 Stockpile Samples*

		Sample Number and Collection Date					Regulatory Levels	
Analyte	EPA Method	B37-RE4-SP45 4/14/97	B37-RE4-SP46 4/15/97	B37-RE4-SP47 4/15/97	B37-RE4-SP48 4/16/97	B37-RE4-SP49 4/16/97	TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	20	85	<8.0	23	1,700		
Title 22 Metals (mg/kg)								
Antimony	6010	<5.0	<5.0	<5.0	<5.0	<5.0	500	150
Arsenic	6010	<1.0	<1.0	<1.0	<1.0	<1.0	500	50
Barium	6010	110	110	100	100	110	10,000	1,000
Beryllium	6010	<0.1	<0.1	<0.1	<0.1	<0.1	75	7.5
Cadmium	6010	<0.1	<0.1	<0.1	<0.1	<0.1	100	10
Chromium (VI)	7196	<0.5	<0.5	<0.5	<0.5	<0.5	500	50
Chromium (total)	6010	22	22	24	33	22	2,500	50
Cobalt	6010	6.2	5.9	6.7	7.6	6.9	8,000	800
Copper	6010	14	14	12	12	11	2,500	250
Lead (total)	6010	<1.0	<1.0	<1.0	<1.0	<1.0	1,000	50
Mercury	7471	<0.01	<0.01	<0.01	<0.01	<0.01	20	2
Molybdenum	6010	<0.5	<0.5	<0.5	<0.5	<0.5	3,500	3,500
Nickel	6010	8.8	9.2	9.2	10	9.9	2,000	200
Selenium	6010	<1.0	<1.0	<1.0	<1.0	<1.0	100	10
Silver	6010	<0.1	<0.1	<0.1	<0.1	<0.1	500	50
Thallium	6010	<5.0	<5.0	<5.0	<5.0	<5.0	700	70
Vanadium	6010	23	23	24	29	25	2,400	240
Zinc	6010	40	44	36	48	41	5,000	2,500
VOCs (1) (mg/kg)								
Ethylbenzene	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.05		
Trichloroethene	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.05		
Total Xylenes	8260	<0.0025	<0.0025	<0.0025	<0.0025	0.120		
Isopropylbenzene	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.05		
n-Propylbenzene	8260	<0.0025	<0.0025	<0.0025	<0.0025	0.058		
1,3,5-Trimethylbenzene	8260	<0.0025	<0.0025	<0.0025	<0.0025	0.098		
tert-Butylbenzene	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.05		
1,2,4-Trimethylbenzene	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.05		
sec-Butylbenzene	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.05		
p-Isopropyltoluene	8260	<0.0025	<0.0025	<0.0025	<0.0025	<0.05		
n-Butylbenzene	8260	<0.0025	<0.0025	<0.0025	<0.0025	0.074		
1,2,4-Trichlorobenzene	8260	<0.0025	<0.0025	<0.0025	<0.0025	0.130		
Naphthalene	8260	<0.0025	<0.0025	<0.0025	<0.0025	0.280		
1,2,3-Trichlorobenzene	8260	<0.0025	<0.0025	<0.0025	<0.0025	0.170		
SVOCs (1) (mg/kg)								
Acenaphthene	8270	<0.100	<0.100	<0.100	<0.100	0.160		
Anthracene	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
Benzo (a) Anthracene	8270	0.690	<0.100	<0.100	<0.100	<0.100		
Benzo (b) Fluoranthene	8270	0.790	<0.250	<0.250	<0.250	0.270		
Benzo (k) Fluoranthene	8270	0.350	<0.250	<0.250	<0.250	<0.250		
Benzo (a) Pyrene	8270	0.670	<0.250	<0.250	<0.250	<0.250		
Benzo (g,h,i) Perylene	8270	0.600	<0.250	<0.250	<0.250	<0.250		
Chrysene	8270	0.790	<0.100	<0.100	<0.100	0.350		
Dibenz (a,h) Anthracene	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
bis (2-Ethylhexyl)Phthalate	8270	<0.100	<0.100	<0.100	<0.100	<0.100		
Fluoranthene	8270	0.990	0.150	<0.100	0.110	0.330		
Fluorene	8270	<0.100	<0.100	<0.100	<0.100	0.610		
Indeno (1,2,3-cd)Pyrene	8270	0.610	<0.250	<0.250	<0.250	<0.250		
2-Methylnaphthalene	8270	<0.100	<0.100	<0.100	<0.100	0.540		
Naphthalene	8270	<0.100	<0.100	<0.100	<0.100	0.310		
Phenanthrene	8270	0.300	0.140	<0.100	<0.100	1.500		
Pyrene	8270	0.880	0.200	<0.100	<0.100	0.200		
Carbon Chain Range (mg/kg)	sim. dist	--	--	--	--	--		
PCBs (mg/kg)	8080	--	--	--	--	--		

mg/kg = milligrams per kilogram
mg/L = milligrams per liter
-- = not analyzed
sim.dist. = simulated distillation
VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons
PCBs = Polychlorinated Biphenyls
(1) VOCs and SVOCs not listed were not detected
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

* Refer to Figure 6 for sample locations

TABLE 3
Analytical Data Summary
Remedial Excavation B37-RE-4 Stockpile Samples*

Analyte	EPA Method	Sample Number and Collection Date: B37-RE4-SP50 4/17/97	B37-RE4-SP51 4/18/97	B37-RE4-SP52 4/24/97	Regulatory Levels: TTLC (mg/kg)	10X STLC (mg/L)
TRPH (mg/kg)	418.1	320	17	76		
Title 22 Metals (mg/kg)						
Antimony	6010	<5.0	<5.0	<5.0	500	150
Arsenic	6010	<1.0	<1.0	<1.0	500	50
Barium	6010	100	110	91	10,000	1,000
Beryllium	6010	<0.1	<0.1	<0.1	75	7.5
Cadmium	6010	8.0	4.8	2.8	100	10
Chromium (VI)	7196	<0.5	<0.5	<0.5	500	50
Chromium (total)	6010	63**	41	35	2,500	50
Cobalt	6010	8.5	7.4	6.8	8,000	800
Copper	6010	29	17	16	2,500	250
Lead (total)	6010	17	7.2	34	1,000	50
Mercury	7471	<0.01	<0.01	<0.01	20	2
Molybdenum	6010	<0.5	<0.5	<0.5	3,500	3,500
Nickel	6010	15	12	12	2,000	200
Selenium	6010	<1.0	<1.0	<1.0	100	10
Silver	6010	<0.1	<0.1	<0.1	500	50
Thallium	6010	<5.0	<5.0	<5.0	700	70
Vanadium	6010	32	27	26	2,400	240
Zinc	6010	99	68	60	5,000	2,500
VOCs (1) (mg/kg)						
Ethylbenzene	8260	<0.0025	<0.0025	<0.0025		
Trichloroethene	8260	<0.0025	<0.0025	<0.0025		
Total Xylenes	8260	<0.0025	<0.0025	<0.0025		
Isopropylbenzene	8260	<0.0025	<0.0025	<0.0025		
n-Propylbenzene	8260	<0.0025	<0.0025	<0.0025		
1,3,5-Trimethylbenzene	8260	<0.0025	<0.0025	<0.0025		
tert-Butylbenzene	8260	<0.0025	<0.0025	<0.0025		
1,2,4-Trimethylbenzene	8260	<0.0025	<0.0025	<0.0025		
sec-Butylbenzene	8260	<0.0025	<0.0025	<0.0025		
p-Isopropyltoluene	8260	<0.0025	<0.0025	<0.0025		
n-Butylbenzene	8260	<0.0025	<0.0025	<0.0025		
1,2,4-Trichlorobenzene	8260	<0.0025	<0.0025	<0.0025		
Naphthalene	8260	<0.0025	<0.0025	<0.0025		
1,2,3-Trichlorobenzene	8260	<0.0025	<0.0025	<0.0025		
SVOCs (1) (mg/kg)						
Acenaphthene	8270	<0.100	<0.100	<0.100		
Anthracene	8270	<0.100	<0.100	<0.100		
Benzo (a) Anthracene	8270	0.110	<0.100	0.570		
Benzo (b) Fluoranthene	8270	<0.250	<0.250	0.740		
Benzo (k) Fluoranthene	8270	<0.250	<0.250	0.300		
Benzo (a) Pyrene	8270	<0.250	<0.250	0.590		
Benzo (g,h,i) Perylene	8270	<0.250	<0.250	<0.250		
Chrysene	8270	0.170	<0.100	0.600		
Dibenz (a,h) Anthracene	8270	<0.100	<0.100	<0.100		
bis (2-Ethylhexyl)Phthalate	8270	0.410	<0.100	<0.100		
Fluoranthene	8270	0.150	<0.100	0.660		
Fluorene	8270	<0.100	<0.100	<0.100		
Indeno (1,2,3-cd)Pyrene	8270	<0.250	<0.250	<0.250		
2-Methylnaphthalene	8270	<0.100	<0.100	<0.100		
Naphthalene	8270	<0.100	<0.100	<0.100		
Phenanthrene	8270	<0.100	<0.100	0.220		
Pyrene	8270	0.170	<0.100	0.550		
Carbon Chain Range (mg/kg)	sim. dist	--	--	--		
PCBs (mg/kg)	8080	--	--	--		

mg/kg = milligrams per kilogram
mg/L = milligrams per liter
-- = not analyzed
sim.dist. = simulated distillation
VOCs = Volatile Organic Compounds
SVOCs = Semi-volatile Organic Compounds
TRPH = Total Recoverable Petroleum Hydrocarbons
PCBs = Polychlorinated Biphenyls

(1) VOCs and SVOCs not listed were not detected
TTLC = California Total Threshold Limit Concentration
10X STLC = Ten Times the California Soluble Threshold Limit Concentration

** Waste Extraction Test performed on this sample. Result was 2.8 mg/L

* Refer to Figure 6 for sample locations

TABLE 4
Draft Health-Based Screening Criteria (HBSC)
(Page 1 of 4)

Compounds	Const. Worker Exposure Scenario (mg/kg)	Com/Ind Worker Exposure Scenario (mg/kg)	Proposed HBSC (mg/kg)
1,1,1,2-tetrachloroethane	4.19E+02	2.40E+03	4.19E+02
1,1,2,2-tetrachloroethane	5.29E+01	2.50E+02	5.29E+01
1,1,2-trichloroethane	1.56E+02	1.59E+02	1.56E+02
1,1-dichloroethane	1.06E+03	1.88E+02	1.88E+02
1,1-dichloroethene	1.58E+00	6.82E-02	6.82E-02
1,2,3-trichloropropane	1.97E+00	NA	1.97E+00
1,2,4-trichlorobenzene	1.74E+02	7.91E+06	1.74E+02
1,2-dibromo-3-chloropropane	2.09E+00	1.25E+01	2.09E+00
1,2-dibromoethane	4.71E+00	4.08E+01	4.71E+00
1,2-dichlorobenzene	NA	1.00E+06	1.00E+06
1,2-dichloroethane	1.14E+02	3.76E+01	3.76E+01
1,2-dichloropropane	6.74E+00	1.21E+00	1.21E+00
1,2-diphenylhydrazine	2.03E+01	3.93E+07	2.03E+01
1,3-dichloropropene	3.69E+01	1.11E+02	3.69E+01
1,4-dichlorobenzene	3.97E+02	7.30E+03	3.97E+02
2,4,5-trichlorophenol	1.70E+04	NA	1.70E+04
2,4,6-trichlorophenol	2.51E+02	1.84E+06	2.51E+02
2,4-dichlorophenol	5.15E+01	NA	5.15E+01
2,4-dimethylphenol	3.46E+03	NA	3.46E+03
2,4-dinitrophenol	1.98E+00	NA	1.98E+00
2,4-dinitrotoluene	3.48E+01	1.27E+06	3.48E+01
2,6-dinitrotoluene	2.58E+01	NA	2.58E+01
2-butanone	2.66E+04	3.92E+05	2.66E+04
2-chlorophenol	8.04E+02	NA	8.04E+02
2-methylphenol	8.44E+03	NA	8.44E+03
2-naphthylamine	9.79E+00	2.72E+05	9.79E+00
3,3-dichlorobenzidine	1.47E+01	1.25E+08	1.47E+01
4,4-ddd	1.03E+02	1.67E+08	1.03E+02
4,4-dde	7.24E+01	4.72E+05	7.24E+01
4,4-ddt	1.22E+01	3.78E+07	1.22E+01
4-chloroaniline	6.76E+01	NA	6.76E+01
4-methyl-2-pentanone	7.68E+03	1.14E+05	7.68E+03
4-methylphenol	8.59E+01	NA	8.59E+01
acenaphthene	7.98E+03	NA	7.98E+03
acetone	1.74E+04	NA	1.74E+04
aldrin	7.33E-01	4.50E+03	7.33E-01

TABLE 4
Draft Health-Based Screening Criteria (HBSC)
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Compounds	Const. Worker Exposure Scenario (mg/kg)	Com/Ind Worker Exposure Scenario (mg/kg)	Proposed HBSC (mg/kg)
alpha-bhc	3.91E+00	3.87E+04	3.91E+00
aniline	7.38E+02	1.70E+06	7.38E+02
anthracene	4.06E+03	NA	4.06E+03
antimony	9.05E+00	NA	9.05E+00
aroclor 1254	8.72E-01	NA	8.72E-01
arsenic	8.87E+00	NA	8.87E+00
barium	2.52E+03	NA	2.52E+03
benzene	7.87E+01	2.50E+01	2.50E+01
benzidine	3.47E-02	2.58E+01	3.47E-02
benzo(a)anthracene	1.14E+01	3.32E+08	1.14E+01
benzo(a)pyrene	1.14E+00	1.60E+07	1.14E+00
benzo(b)fluoranthene	1.14E+01	5.35E+07	1.14E+01
benzo(k)fluoranthene	1.14E+01	1.60E+07	1.14E+01
benzoic acid	6.97E+04	NA	6.97E+04
benzyl alcohol	1.74E+04	NA	1.74E+04
benzyl chloride	8.79E+01	6.72E+02	8.79E+01
beryllium**	1.82E+02	NA	1.82E+02
beta-bhc	1.37E+01	1.65E+06	1.37E+01
beta-chloronaphthalene***	NA	3.92E+06	3.92E+06
bis(2-chloro-1-methylethyl)ether	2.35E+02	4.88E+03	2.35E+02
bis(2-chloroethyl)ether	6.34E+00	1.15E+02	6.34E+00
bis(2-ethylhexyl)phthalate	2.10E+03	1.31E+10	2.10E+03
bromodichloromethane	1.45E+01	NA	1.45E+01
bromoform	3.49E+02	1.32E+04	3.49E+02
bromomethane	NA	1.92E+01	1.92E+01
cadmium**	1.64E+01	NA	1.64E+01
carbon disulfide	8.27E+02	1.17E+04	8.27E+02
carbon tetrachloride	6.18E+01	3.12E+01	3.12E+01
chlorobenzene	NA	1.08E+04	1.08E+04
chloroform	1.85E+02	1.35E+02	1.35E+02
chloromethane	2.64E+02	1.23E+01	1.23E+01
chromium iii	3.22E+04	NA	3.22E+04
chromium vi	9.73E+01	NA	9.73E+01
chrysene	1.14E+02	2.32E+09	1.14E+02
cis-1,2-dichloroethene	1.74E+03	NA	1.74E+03
copper	1.26E+03	NA	1.26E+03

TABLE 4
Draft Health-Based Screening Criteria (HBSC)
(Page 3 of 4)

Compounds	Const. Worker Exposure Scenario (mg/kg)	Com/Ind Worker Exposure Scenario (mg/kg)	Proposed HBSC (mg/kg)
cumene	1.34E+03	9.56E+03	1.34E+03
dibenzo(a,h)anthracene	3.35E+00	1.06E+11	3.35E+00
dibromochloromethane	1.02E+02	5.63E+01	5.63E+01
dichlorodifluoromethane	4.80E+02	1.17E+02	1.17E+02
dieldrin	1.22E+00	3.87E+03	1.22E+00
diethyl phthalate	1.39E+05	NA	1.39E+05
di-n-butylphthalate	1.74E+04	NA	1.74E+04
di-n-octylphthalate	3.49E+02	NA	3.49E+02
endosulfan	1.47E+02	NA	1.47E+02
endrin	7.33E+00	NA	7.33E+00
ethyl chloride	2.84E+04	2.61E+05	2.84E+04
ethylbenzene	NA	1.56E+05	1.56E+05
fluoranthene	6.97E+03	NA	6.97E+03
fluorene	6.97E+03	NA	6.97E+03
gamma-bhc	2.30E+01	4.39E+04	2.30E+01
heptachlor	2.77E+00	2.97E+02	2.77E+00
heptachlor epoxide	3.18E-01	2.25E+02	3.18E-01
hexachlorobenzene	9.20E+00	4.66E+02	9.20E+00
hexachlorobutadiene	2.13E+02	1.19E+04	2.13E+02
hexachlorocyclopentadiene	1.88E+01	1.63E+02	1.88E+01
hexachloroethane	1.74E+02	4.00E+04	1.74E+02
indeno(1,2,3-cd)pyrene	1.47E+01	2.05E+10	1.47E+01
isophorone	1.81E+04	NA	1.81E+04
mercury	6.78E+00	NA	6.78E+00
methylene chloride	8.31E+02	2.20E+02	2.20E+02
molybdenum	1.24E+03	NA	1.24E+03
n-butylbenzyl phthalate	3.49E+03	NA	3.49E+03
nickel	3.70E+02	NA	3.70E+02
nitroaniline, o-	1.62E+03	4.08E+05	1.62E+03
nitrobenzene	8.20E+01	2.97E+04	8.20E+01
nitrosodiphenylamine, p-	7.95E+02	1.72E+06	7.95E+02
n-nitrosodimethylamine	1.10E+00	NA	1.10E+00
n-nitroso-di-n-propylamine	2.33E+00	7.44E+01	2.33E+00
n-nitrosodiphenylamine	1.94E+03	4.20E+06	1.94E+03
o-chlorotoluene	3.49E+03	NA	3.49E+03
pentachlorophenol	3.05E+02	2.17E+09	3.05E+02

TABLE 4
Draft Health-Based Screening Criteria (HBSC)
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Compounds	Const. Worker Exposure Scenario (mg/kg)	Com/Ind Worker Exposure Scenario (mg/kg)	Proposed HBSC (mg/kg)
phenol	1.05E+04	NA	1.05E+04
pyrene	2.35E+03	NA	2.35E+03
selenium	1.77E+02	NA	1.77E+02
silver	5.98E+01	NA	5.98E+01
styrene	6.03E+04	1.26E+06	6.03E+04
tetrachloroethene	2.48E+02	8.20E+01	8.20E+01
toluene	3.70E+04	3.71E+04	3.70E+04
trans-1,2-dichloroethene	3.49E+03	NA	3.49E+03
trichloroethene	7.08E+02	3.41E+02	3.41E+02
trichlorofluoromethane	6.27E+03	8.16E+03	6.27E+03
vanadium	8.37E+01	NA	8.37E+01
vinyl acetate	1.44E+03	3.86E+04	1.44E+03
vinyl chloride	3.13E-01	8.05E-03	8.05E-03
xylenes***	2.16E+04	1.35E+06	2.16E+04
zinc	8.26E+03	NA	8.26E+03

Notes:

NA The required toxicity factors (subchronic - const. or inhalation - C/I) under the applicable exposure scenario were unavailable

* All HBSC are base on a hazard quotient of 0.2 and an incremental lifetime cancer risk of $1X10^{-6}$

** No oral cancer potency factor was used for these compounds based on conversations with Jim Collins at Air Toxicology and Epidemiology Section (ATES), Office of Environmental Health Hazard Assessment (OEHHA), April 30, 1997

*** Due to the lack of toxicity data, chronic oral toxicity factors were used as inhalation toxicity factors for the purposes of deriving acceptable HBSC values